

EDIBLE LANDFILL

Objectives: Learn how a sanitary landfill is built
Learn about waste reduction

Began with a few questions:

What happens to the garbage in your neighborhood?

Where does it go after you throw it away?

Discuss the packaging of products and the waste involved.

Find out how much trash each student threw away today.

What can you do to reduce the amount of trash going into the landfill?

- Buy with less packaging
- Reuse
- Recycle

Discuss the different types of waste (paper, plastic, glass, grass clippings, etc.) that go to a landfill.

Discuss how landfills are expensive to build, take up space and pose risks to the environment, particularly water and groundwater.

Discuss how landfills are made.

Explain that they will build a model landfill and what each item is for (can do it as a whole group or in separate groups of 3-5). Keep it simple.

Some age levels will not understand the purpose of each item in the landfill so explain that it is there to help protect people and the environment.

Materials: Pie pan, Pyrex dish or large clear plastic cup
Graham crackers
Vanilla wafers
Fruit roll ups
Licorice (red and black)
Vanilla pudding (prepared according to box)
Chocolate pudding (prepared according to box)
Raisins
M&Ms
Peanuts
Green coconut (coconut dyed with green food color)

Construction: To build an edible landfill

- a. Have young participants add raisins, M&Ms, and peanuts to the vanilla pudding to represent different garbage items
- b. Have participants place graham crackers in a zip locking plastic bag and crush crackers thoroughly. Repeat procedure for vanilla wafers. Keep separate.

- c. Spread a layer of graham cracker crumbs in the bottom of the container. This represents the clay liner that prevents liquids (or leachate) from seeping through to the groundwater.
- d. Add a layer of fruit roll ups. These represent the high-density plastic liner used for added protection.
- e. Place red licorice across the roll ups to represent the leachate collection tubes.
- f. Cover the licorice with crushed vanilla wafers. This represents the sand and gravel layers.
- g. Spread a thin layer of the vanilla pudding with M&Ms, nuts and raisins. This is the first layer of solid waste.
- h. Add a thin layer of chocolate pudding. This is the layer of soil used to cover the waste.
- i. Repeat alternating layers of vanilla and chocolate pudding with the top layer being a chocolate pudding layer
- j. Insert the black licorice vertically into the layers of pudding. This represents methane gas collection tubes, which are used to remove the hazardous gas.
- k. Sprinkle green coconut over the top of the chocolate pudding. This simulates growing of grass to prevent erosion.
- l. Chill and serve by 'excavating' the landfill. (BE AWARE OF FOOD ALLERGIES)

Reflection: Discuss the following while the group is enjoying the taste of their creation:

1. What does each of the food items represent?
2. What happens to the garbage once it is in the landfill (not much without air and water)
3. What happens when a landfill is closed?
4. Where is the closest landfill?
5. Would you want a landfill near your home?
6. Landfills are a last option – What else can you do with your waste?